The business magazine of the farm & industrial equipment industry

December 1982

Implement & Tractor

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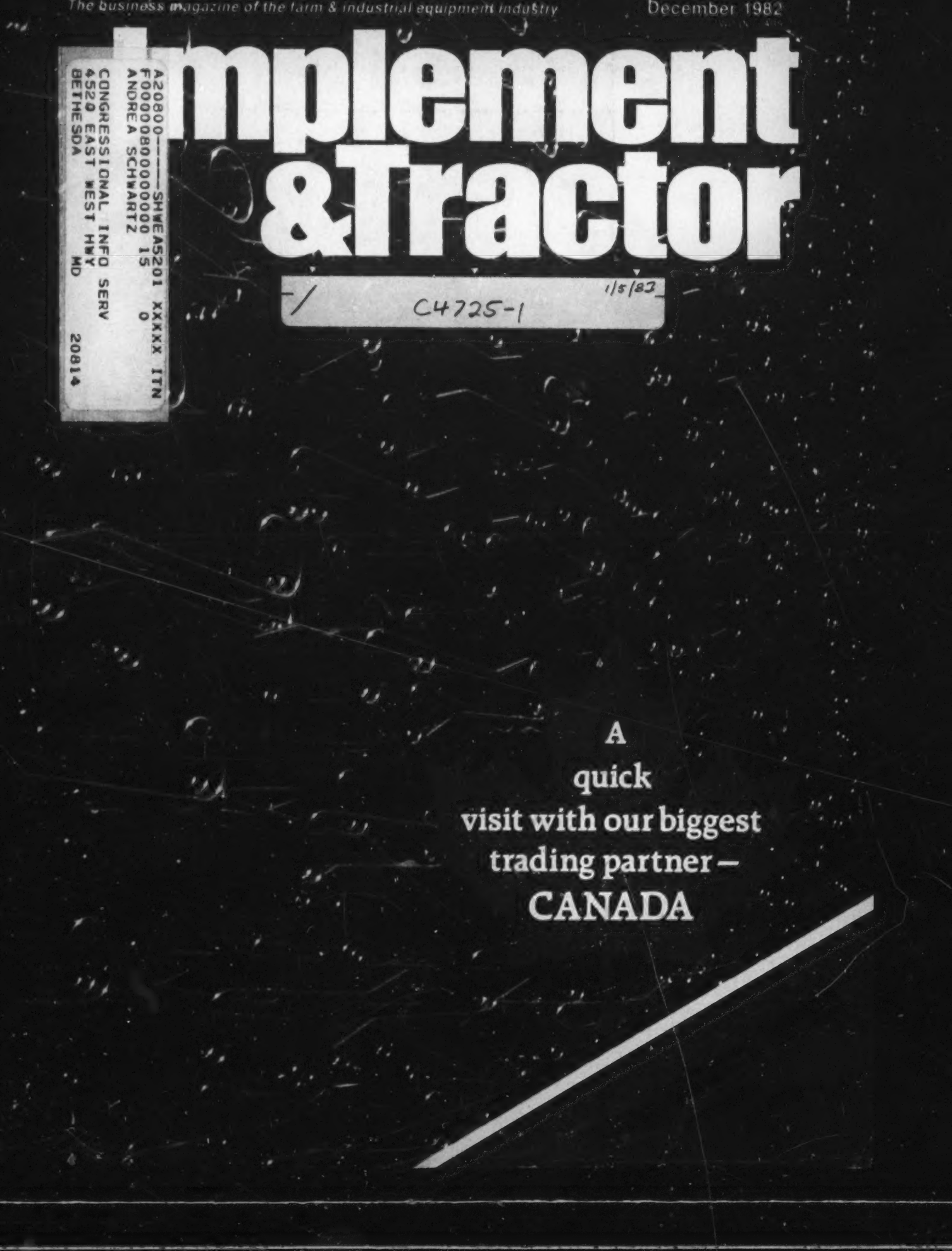

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INTERTEC PUBLISHING CORP.

Implement & Tractor

The business magazine of the farm & industrial equipment industry

December 1982 • Vol. 97 • No. 20

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Visiting Canada: An I&T Special Report

C-1: A Quick Trip Across Canada. This special section opens with the recollections of two veteran Canada watchers.

C-6: Developing Systems for Measuring Tillage Depth. Saskatchewan engineers are researching three new approaches.

C-10: Spray Boom Height Affects Accuracy. Canadian designers are searching for the optimum system.

C-14: Selecting Equipment. A Canadian researcher shows that personal factors are vital considerations in selecting new equipment.

C-22: How Four Canadian Dealers Get Business Through That Long Winter. It really isn't a problem if you plan ahead.

C-25: Finding Every Way to Stay in Touch. To keep up the sales volume at their Dunnville, Ont., dealership, Joe and Dave Cowan increase the frequency of sales contacts. A Canadian "1982: Year of the Salesman" article.

10: Testing and Troubleshooting. Hydraulic testing and troubleshooting techniques can pinpoint failures for quick repair. Part Six in the series on farm equipment hydraulics.

16: Where Do Salesmen Need Most Help? Three of the industry's gurus give I&T a peek at where they think the key problems lie. A "1982: Year of the Salesman" feature.

20: Wholesalers Staying Busy. FEWA's annual gathering draws interest of manufacturers seeking new distributive outlets.

22: Shortliners. The FEMA convention reveals that after a tough year, the hard pushing continues.

25: Reps Seeking Broader Base. At their 1982 convention AIMRA members focused on expanding their market.

31: Prospecting for Dealers: Did You Mention Profit? Walt Beuscher talks about making a success of selling dealerships in this "1982: Year of the Salesman" article.

39: Tillage and Crop Production Equipment Council Looks Ahead. The Council assesses the challenges facing the farm equipment industry today.

On the cover...spring tines in the yard of Morris Rod-Weeder, Minnedosa, Manitoba.

DEPARTMENTS

What's Ahead 4	Industry in Motion 40	News Briefs 45
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What's Ahead...

December, 1982

U.S. RETAIL SALES IN OCTOBER, according to the Farm & Industrial Equipment Institute's flash report, were down substantially in all product categories.

	Unit Retail Sales					
	October			January-October		
	1982	1981	Pct. Change	1982	1981	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	4,005	4,793	-16.4	36,007	44,023	-18.2
Over 100 hp	2,614	5,706	-54.2	24,964	36,559	-31.7
Total 2-wheel drive	6,619	10,499	-37.0	60,971	80,582	-24.3
4-wheel drive	623	880	-29.2	5,695	8,018	-29.0
Total Tractors	7,242	11,379	-36.4	66,666	88,600	-24.8
Combines (S-P)	3,013	5,592	-46.1	12,222	21,445	-43.0
Balers*	527	1,097	-52.0	8,402	13,047	-35.6
Forage Harvesters**	868	1,266	-31.4	4,586	6,523	-29.7
Mower-Conditioners	835	1,293	-35.4	13,143	17,570	-25.2

*Bales under 200 lbs. **Shear-bar type.

IN BRITAIN, A CONTINUING STUDY OF AGRICULTURAL WEAR PROBLEMS is currently focusing on the use of ceramic protection for cultivator tines, plow landsides and subsoilers. Reliable bonds between ceramic and steel are now being achieved, and investigations are in progress to reduce chipping damage and of ceramic applications to other components, according to the British Society for Research in Agricultural Engineering.

SOYBEAN OIL AS A LOW-VOLUME PESTICIDE CARRIER is the subject of research at the U. of Illinois Dept. of Ag Engineering. According to researcher Jack Butler, soybean oil offers several possible advantages over water as a pesticide carrier at low application rates. It leaves non-evaporating droplets, which should drift less and deposit better on the plant. Drift is also reduced somewhat in controlled droplet application. Soybean oil, he said, may provide an increase in pesticide efficiency; a residual effect of oil may result in longer control of a particular pest. Such use of oil offers farmers a potential market totaling 20 million gallons of oil.

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AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

YODER & FREY, INC.
Archbold, Ohio
November 9, 1982

INTERNATIONAL HARVESTER TRACTORS

H, 1945 (Fair) 550
H, 1946 (Fair) 620
M, 1951 (Good) 850*
M, 1950 (Good) 675
Sup. M, 1952 (Good) 925*
Sup. M, 1952 (Fair) 775*
Sup. M, 1952 (Rough) 950*
300, 1956 (Fair) 1175
400 diesel, 1957 (Rough) 625
454, Idr., 1971 (Good) 4300*
504 diesel, 1967 (Fair) 2400*
560 diesel, 1960 (Rough) 800*
560, 1960 (Good) 2100
600 diesel, 1957 (Rough) 700*
656, 1968 (Good) 2725
656, 1968 (Good) 2400*
706, 1964 (Fair) 2900
706, 1965 (Fair) 2450
706 diesel, 1964 (Rough) 1900*
706, 1965, (Fair) 1400*
706, 1964 (Fair) 1700*
756, 1970 (Good) 4300
766 diesel, 1976 (Fair) 7750*
806, 1965 (Good) 2700
806 diesel, 1965 (Rough) 3400*
966 diesel, 1975 (Fair) 6750
1206 diesel, 1967 (Good) 5500
1466 diesel, 1976 (Good) 8500*
1468, 1972 (Fair) 7500*
1586, 1979 (Good) 13,200*
4100, (Good) 4250*

ALLIS-CHALMERS TRACTORS

G, cult., 1951 (Rough) 950*
WD-45 diesel, 1950 (Rough) 325*
D-12, 1965 (Rough) 975
D-14, 1966 (Rough) 1000*
D-17, 1967 (Fair) 1400*
190XT, 1967 (Rough) 2700*
190XT diesel, 1968 (Fair) 3450*
190XT, 1967 (Rough) 4400*
190XT, 1972 (Good) 5100*
160 diesel, 1967 (Fair) 3000*

DAVID BROWN TRACTOR

885, 1974 (Good) 2800*

JOHN DEERE TRACTORS

40, 1955 (Rough) 800*
40, 1954 (Fair) 1125*
40, 1956 (Rough) 950
60, 1956 (Fair) 750*
70, 1954 (Fair) 900*
70, 1970 (Fair) 6000*
720 diesel, 1959 (Rough) 800*
720, 1957 (Fair) 1200
720 diesel, 1957 (Fair) 1575
720, 1958 (Fair) 1550
830 diesel, 1959 (Fair) 2200*
1010, 1962 (Good) 2425
2030, 1977 (Fair) 5100
3020, 1967 (Good) 3175
4020 diesel, 1971 (Fair) 6950
4320 diesel, 1971 (Good) 7250*
4320, 1971 (Good) 8300*
4430 diesel, 1976 (Fair) 8500*
4430, 1977 (Good) 12,000*
5010, 1964 (Fair) 2600*
5020, 1971 (Fair) 4500*
5020, 1969 (Rough) 4000*
7520, 1970 (Good) 12,000*

COCKSHUTT TRACTORS

3, 1946 (Rough) 1360*
540 diesel, 1959 (Rough) 675

OLIVER TRACTORS

550, 1959 (Rough) 1250*
880 diesel, 1959 (Fair) 740
1365, 1975 (Fair) 3750
1600, 1962 (Fair) 2400*
1650 diesel, 1966 (Rough) 3100
1750 diesel, 1965 (Rough) 3250
1800, 1964 (Rough) 2000*
1855 diesel, 1974 (Good) 5400*

CASE TRACTORS

DC, 1946 (Fair) 175
530 diesel, 1965 (Rough) 1800*
930, 1967 (Good) 2500
990, (Fair) 1625
1070 diesel, 1977 (Fair) 6250*
1070 diesel, 1976 (Fair) 7750*
1270 diesel, 1978 (Good) 8750*
2290, 1982 (Excellent) 21,000
2290, 1982 (Excellent) 21,000

FERGUSON & MASSEY FERGUSON TRACTORS

TD-20, Idr., 1947 (Rough) 1200
TD-20, 1947 (Fair) 750
TD-30, Idr., 1950 (Rough) 660
MF-65, 1960 (Rough) 1500*
MF-65, 1960 (Good) 1750
MF-165 diesel, 1970 (Good) 3550
MF-165, 1968 (Fair) 3050*
MF-180 diesel, 1970 (Fair) 3450
MF-1065 diesel, 1976 (Good) 5400
MF-1800, (Fair) 7250*

FORD TRACTORS

8N, 1950 (Rough) 875
8N, 1952 (Fair) 1250
8N, 1948 (Fair) 1075
8N, 1952 (Rough) 1075*
8N, 1950 (Fair) 900
9N, 1944 (Rough) 750*
9N, 1944 (Fair) 1050*
9N, 1945 (Fair) 800
901, Idr., 1957 (Rough) 1000
3000, 1971 (Fair) 2250
3000, 1971 (Fair) 2700
4000 diesel, 1967 (Rough) 3350*
4000, 1971 (Good) 4900
4000, (Good) 2500
5000 diesel, 1969 (Rough) 4900*
8000 diesel, 1971 (Rough) 4750*
1700 diesel, 1981 (Excellent) 3650*

MASSEY-HARRIS TRACTOR

44, 1950 (Fair) 475*

MINNEAPOLIS-MOLINE TRACTOR

M-670, Idr., (Good) 3000

WHITE TRACTOR

2-60 diesel, ... 6950

JONES FARM EQUIPMENT CO.
Dothan, Alabama
November 9, 1982

ALLIS-CHALMERS TRACTORS

175 diesel, 1978 (Good) 4300*
170 diesel, 1969 (Rough) 1400
ED40 diesel, 1968 (Good) 1000

DEUTZ TRACTORS

6006 diesel, (Fair) 2400*
4006 diesel, 1973 (Fair) 1100*

DAVID BROWN TRACTORS

1210 diesel, 1973 (Good) 3100*
990 diesel, 1968 (Excellent) 2750

MASSEY-FERGUSON TRACTORS

1085 diesel, 1974 (Fair) 4250
1085 diesel, 1973 (Fair) 4325
245 diesel, 1976 (Good) 4500*
245 diesel, 1976 (Good) 4800
245 diesel, 1976 (Good) 4600
245 diesel, 1976 (Good) 4700*
175 diesel, 1974 (Good) 3700*
175 diesel, 1972 (Good) 3750*
175 diesel, 1969 (Good) 4025
175 diesel, 1967 (Good) 3600
165 diesel, 1973 (Good) 3600
165 diesel, 1971 (Fair) 3000
165 diesel, 1970 (Excellent) 4100*
165 diesel, 1969 (Rough) 1800*
165 diesel, 1967 (Good) 3500*
165 diesel, 1967 (Excellent) 3900*
165 diesel, 1966 (Rough) 2300
165 diesel, 1966 (Fair) 3050*
135 diesel, 1966 (Excellent) 3500
135 diesel, 1966 (Good) 3100
130 diesel, 1968 (Fair) 1950
65 diesel, 1964 (Fair) 1400
65 diesel, 1964 (Good) 1925
35 diesel, 1963 (Good) 2000*
35, 1962 (Good) 1900
35, 1962 (Good) 2150
35 diesel, 1958 (Rough) 825
TO20, 1949 (Good) 950

FORD-FERGUSON TRACTORS

9N, blade, cutter, 1945 (Good) 1175
9N, 1943 (Fair) 750

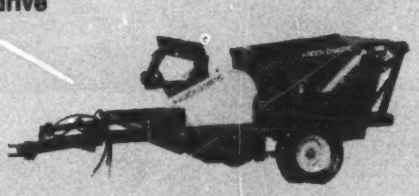
FORD TRACTORS

9000 diesel, 1972 (Good) 3700*
8600 diesel, 1974 (Fair) 5000
5600 diesel, 1976 (Good) 5900
5000 diesel, 1975 (Good) 4700
5000 diesel, 1973 (Excellent) 5100*
5000 diesel, 1970 (Good) 4500
5000 diesel, 1968 (Rough) 2950
4000 diesel, 1978 (Excellent) 5800*
4000 diesel, 1970 (Good) 4100*
4000 diesel, 1965 (Rough) 950*
3000 diesel, 1973 (Excellent) 4300
3000 diesel, 1968 (Good) 3300
3000, burned, 1966 (Rough) 725

(More...)

ROCK-O-MATIC MODEL 546 ROCKPICKER

PTO, Hyd. or ground drive



ROCK-O-MATIC IND.

Box 1607, MINOT, ND (701) 852-5833
or WICHITA, KS (316) 945-0295

Circle (34) on Reply Card

Auctions
(continued)

3000 diesel, 1968 (Good) 2875
3000 diesel, 1966 (Good) 3450*
2000, Select-O-Speed, 1964 (Good) 1600
2000 diesel, 1963 (Rough) 1000
641, 1959 (Good) 1900*
641, 1958 (Fair) 1150
Dexta, 1960 (Good) 1750
Dexta, 1958 (Fair) 1050*
Dexta, 1961 (Good) 1750
Dexta, 1961 (Good) 1750
8N, 1952 (Excellent) 1950
8N, 1951 (Good) 1250
8N, 1951 (Good) 1200
8N, 1950 (Good) 1000
8N, 1948 (Rough) 550

INTERNATIONAL HARVESTER TRACTORS

1466 diesel, 1975 (Good) 7350*
666 diesel, 1973 (Good) 3500*
656 diesel, 1967 (Rough) 1700
484 diesel, 1979 (Excellent) 8500*
444 diesel, 1969 (Good) 2400
B414, Idr., 1963 (Rough) 625
H, 1941 (Good) 375*
Sup. A, 1948 (Excellent) 1650*
A, 1942 (Fair) 250
A, 1942 (Fair) 325
Cub, 1951 (Good) 1450
Cub, cult., 1950 (Good) 1200

JOHN DEERE TRACTORS

4040 diesel, cab, duals, 1978 (Excellent) 14,600
4020 diesel, 1969 (Good) 5500
4020 diesel, 1969 (Good) 5100*
4020 diesel, 1968 (Good) 4700
2040 diesel, 1976 (Good) 5400
2030 diesel, 1974 (Good) 3650
2020 diesel, 1969 (Good) 3600*
2010, 1963 (Good) 1800
820 diesel, 1974 (Good) 2450

LONG TRACTORS

900 diesel, (Fair) 1750
560 diesel, (Good) 3800*

OLIVER TRACTOR

1955 diesel, 1971 (Fair) 3300

NOTES:
Prices reported are for individual sales at wholesale on an "as is," "cash and carry" basis. Prices reported are **not** averages.

Condition Classifications:
EXCELLENT: Engine in perfect condition, 400 to 600 hours of use. Rubber—80% tread remaining, no breaks or cracks. Paint—original and bright. General appearance: excellent.

GOOD: Engine in good running condition. Rubber—70% tread remaining, no breaks or cracks. Paint—original or a good repaint job. General appearance: good over-all.

FAIR: Engine possibly in need of a minor overhaul. Rubber—60% tread remaining, some cracking evident in sidewalls. Paint—only fair, weathered and some rust apparent. General appearance: worn, some dents, minor parts (gage covers, etc.) missing or broken.

ROUGH: Engine obviously in need of a major overhaul. Rubber—smooth. Paint—scarred, weathered, rusty. General appearance: dents, ruptures, broken parts, loose wires, components (such as lights) broken, missing or inoperative.

Don't sell too low...

and don't pay

too much...

stay up-to-date

on used equipment

values with I&T

The business magazine of the farm & industrial equipment industry

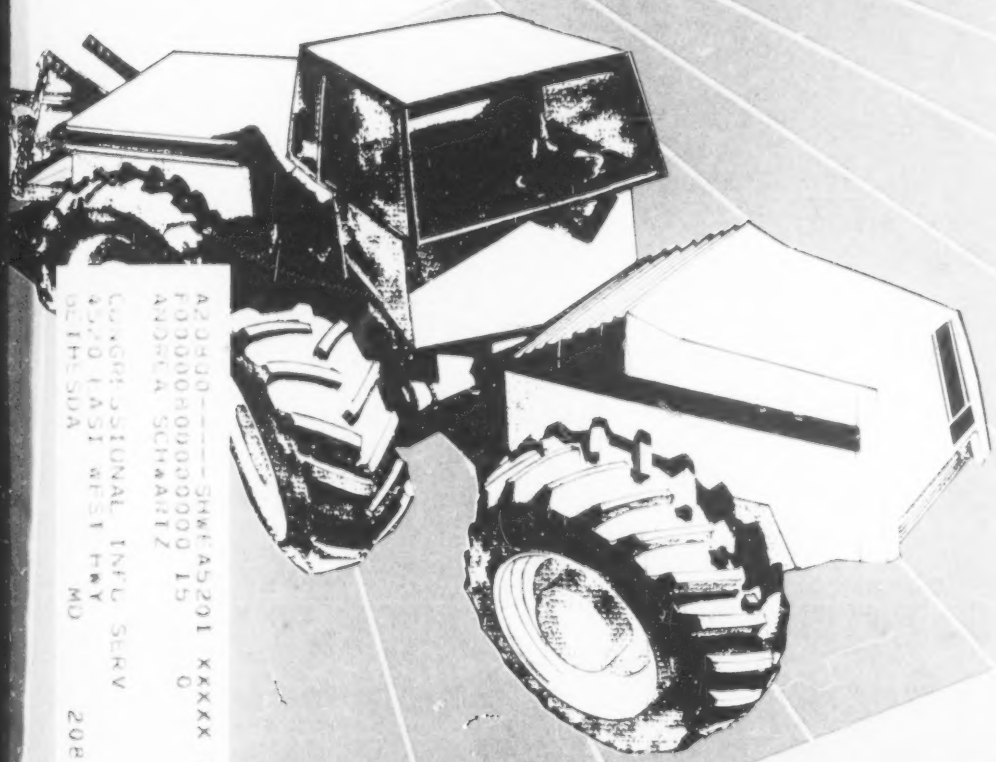
January 1983
TWO DOLLARS

Implement & Tractor

18th annual Engineering Concepts issue

THE FUTURE TRACTOR: WHAT CAN WE EXPECT?

Special series starts on page 11



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January 1983 • Vol. 98 • No. 1

18th Engineering Concepts Issue
THE FUTURE TRACTOR

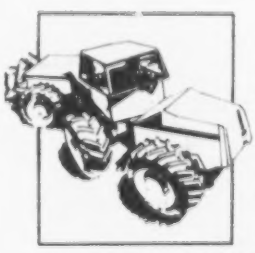
11: Introduction: Tractors of Tomorrow – who can predict the designs we'll see in the next decade? To prepare you for this four-part series, we examine some predictions of the past.

12: Future Tractors: Size and Shape of Things to Come. Some of the professional dreamers among the manufacturers' experts share their thoughts.

14: Some Tractors for Today. After all that conjecture, here's a look at a few of the newly introduced models that have to be sold *now*.

18: Jim Anderson's Prescription for Survival. As we enter what looks like another tough year, this California dealer reminds us about some of the basics we must consider if we want to stay in the game.

34: Sales Territory: What Size is Right? Dealer Numbers: What's Optimum? Walt Buescher, the veteran sales executive, reflects on some of the knotty problems that sales managers must face in getting the right balance in the field.



On the cover... To symbolize the theme of our 18th Engineering Concepts Issue, we're showing this sketch that some J I Case Co. idea men worked up a while back.

DEPARTMENTS

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What's Ahead...

I&T SINCE 1886

January 1983

CANADIAN MARKET FORECAST: ABOUT LIKE LAST YEAR. The Canadian Farm & Industrial Equipment Institute's annual meeting has produced an outlook report indicating that 1983 unit retail sales will run approximately level with 1982 performance:

Product	Unit Retail Sales 1981(a)	1982(e)	1983(f)
Farm Wheel Tractors			
All, Eastern Canada	11,426	9,856	9,985
All, Western Canada	15,548	11,127	11,132
Two-Wheel Drive:			
9-19 hp	1,553	1,896	1,567
20-39.9 hp	2,118	1,675	1,704
40-99.9 hp	10,609	8,228	8,534
100 hp and over	8,356	5,772	6,010
Four-Wheel Drive:			
Under 200 hp	2,554	1,793	1,734
200 hp and over	1,794	1,622	1,568
Front-Wheel Assist:			
Under 40 hp	1,798	1,818	1,861
40-99.9 hp	2,259	1,670	1,798
100 hp and over	297	201	226
Swathers, Self-Propelled	4,280	3,145	3,262
Swathers, Pull-Type	4,387	3,130	3,121
Combines, Self-Propelled	4,915	3,067	3,151
Combines, Pull-Type	2,478	1,572	1,731
Corn Heads	940	594	563
Balers (under 200 lbs.)	3,252	2,325	2,367
Balers (200 lbs. and over)	3,264	2,522	2,670
Forage Harvesters (shear-bar type)	1,349	869	827
Mower-Conditioners	4,023	2,865	2,970
Moldboard Plows (pull-type, mounted)	4,093	3,047	3,092
Chisel Plows	4,060	3,600	3,483
Diskers	2,251	1,750	1,737
All Disk Harrows	4,454	3,075	3,286
All Grain Drills	8,953	7,056	7,012
Corn Planters	1,531	1,116	1,217
Manure Spreaders	2,502	2,575	2,602
Grinder-Mixers	1,135	972	950

Source: Canadian Farm & Industrial Equipment Institute.
(a) actual retail sales. (e) actual sales plus estimates on the 4th period. (f) forecast by participating manufacturers of CFIEI.

(Continued on facing page)

Editor's Notebook

Outlook Time: FIEI's Barker Takes His Turn

It's prediction season again, time for industry soothsayers to assess the outlook for the coming year. As evidence, you'll find the Canadian forecast on the opposite page, for starters. And later this month, U.S. farm equipment marketers will gather at the Farm & Industrial Equipment Institute's Marketing & Management Conference to issue their group prediction.

From a different, and safer, perspective, I&T's special contributor, Frank Buckingham, launches a four-part series that takes a look at the tractor of the future. This kind of future-gazing is safer because if we're wrong about what happens in 1990 or 1995, who's to remember? And if it's remembered, and challenged, we'll think of some plausible excuse by then. (Economists do it. Why can't we?)

Emmett Barker, president of the FIEI, recently played a role in the USDA's annual Outlook Conference, taking a look at several immediate, intermediate and long-term aspects of the business.

Of the next 24 months, he said: "Manufacturers believe a slow but firming trend in levels of equipment purchasing will take place over the next several months with a much stronger response in late 1983 and 1984."

Barker cites some of the things that will bring farmers back into the equipment marketplace. The obvious ones are lower levels of inflation and reduced borrowing costs, as well as the fact that many pieces of presently owned machinery have been pushed to the limit. But he also points out that "fully informed bankers will soon begin advising their farmer clients to take advantage of price discounting which will disappear as dealer and manufacturer inventories are brought under control." Further, Barker suggests that some farmers are doing better than they care to admit to neighbors, particularly those whose 1982 production was booked at prices far more favorable than we have now. "Banker encouragement to buy," he says, "could be especially prevalent where farmers have little or no debt, significant land equity and also have CDs maturing now."

Another factor he cites: The emergence of the skilled manager who views acquiring new equipment in a broader business context than current profitability situations. "This will lead to a more constant upgrading," he says.

From there, Barker assesses some intermediate consequences—the next three to eight years—of the depressed sales levels and loss of corporate profitability we've been going through.

•Economic dislocations experienced by this business may slow down the rate of new product introductions. Capital for retooling isn't available; R&D people and

(More...)

NOVEMBER U.S. RETAIL SALES WERE DOWN in all categories reported by the Farm & Industrial Equipment Institute in its flash report.

	Unit Retail Sales					
	November			January-November		
	1982	1981	Pct. Change	1982	1981	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	2,588	3,114	-16.9	38,581	47,137	-18.2
Over 100 hp	2,043	3,143	-35.0	27,006	39,702	-32.0
Total 2-wheel drive	4,631	6,257	-26.0	65,587	86,839	-24.5
4-wheel drive	388	845	-54.1	6,082	8,863	-31.4
Total Tractors	5,019	7,102	-29.3	71,669	95,702	-25.1
Combines (S-P)	1,723	3,464	-50.3	13,943	24,909	-44.0
Balers*	265	328	-19.2	8,671	13,375	-35.2
Forage Harvesters**	379	832	-54.4	4,961	7,355	-32.5
Mower-Conditioners	383	440	-13.0	13,529	18,010	-24.9

*Bales under 200 lbs. **Shear-bar type.

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Implement & Tractor

The business magazine of the farm & industrial equipment industry

February 1983 • Vol. 98 • No. 3

8: **Tomorrow's Tractor Fuel? Diesel.** Part II of our Future Tractor Series finds experts predicting that diesels will remain the prime mover in ag equipment, with some changes.

10: **Credit and Collections.** If that cover photo caught your attention, you'll enjoy this new series that opens with a look at how receivables tie in to bottom line profit.

12: **Collect your Money and Keep your Customer.** Two dealers give solid advice on how to handle the customer who wants credit.

18: **Front Wheel Assist: A study questions its value.** Research shows 2WD tractors may not need driven front wheels, and some sharp reactions are heard from tractor executives.

26: **Two-Year Forecast Sees Hope and Changes.** A stronger market with a smaller dealer network are foreseen by many in this first of two parts on the FIEI Marketing & Management Conference.

On the Cover... After working on our credit and collection series, we found you *can* squeeze blood out of a turnip with a little advance preparation.

DEPARTMENTS

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What's Ahead...

February 1983

U.S. RETAIL SALES OF FARM EQUIPMENT in December followed the general downward trend of earlier months, except for an improvement in combine sales, according to the Farm & Industrial Equipment Institute flash report:

	Unit Retail Sales					
	December			January-December		
	1982	1981	Pct. Change	1982	1981	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	2,482	3,836	-35.3	41,056	50,973	-19.5
Over 100 hp	2,241	3,477	-35.5	29,254	43,179	-32.2
Total 2-wheel drive	4,723	7,313	-35.4	70,310	94,152	-25.3
4-wheel drive	701	820	-14.5	6,782	9,683	-30.0
Total Tractors	5,424	8,133	-33.3	77,092	103,835	-25.8
Combines (S-P)	2,261	1,922	+17.6	16,208	26,831	-39.6
Balers*	234	272	-14.0	8,898	13,647	-34.8
Forage Harvesters**	183	249	-26.5	5,140	7,604	-32.4
Mower-Conditioners	458	511	-10.4	13,985	18,521	-24.5

*Bales under 200 lbs. **Shear-bar type.

Note: FIEI's 1983-1984 retail sales forecast appears on page 26 of this issue. Subsequently, there may be some refinement of the forecast (taken among members in December) as a follow-up study to assess the impact of the USDA's Payment-in-Kind program.

CANADIAN RETAIL SALES in 1982 presented a picture similar to that of the U.S., according to the Canadian Farm & Industrial Equipment Institute:

	Unit Retail Sales					
	December			January-December		
	1982	1981	Pct. Change	1982	1981	Pct. Change
Farm Wheel Tractors:						
2-wheel drive						
40-100 hp	550	677	-18.8	8,886	10,846	-18.1
Over 100 hp	445	663	-32.9	6,359	8,522	-25.4
Total 2-wheel drive	995	1,340	-25.7	15,245	19,368	-21.3
4-wheel drive	276	464	-40.5	3,217	4,365	-26.3
Total Tractors	1,271	1,804	-29.5	18,462	23,733	-22.2
Mower-Conditioners	62	52	+19.2	2,713	3,878	-30.0
Balers: under 200 lbs.	77	49	+57.1	2,334	3,232	-27.8
over 200 lbs.	61	64	- 4.7	2,346	3,159	-25.7
Forage Harvesters*	32	25	+28.0	794	1,282	-38.1
Combines: pull-type	61	53	+15.1	1,657	2,481	-33.2
self-propelled	200	320	-37.5	3,541	5,055	-29.9
Swathers: pull-type	67	86	-22.1	3,658	4,469	-18.1
self-propelled	102	222	-54.1	3,155	4,295	-26.5

*shear-bar type.

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Peter Perkins (FMC Corp.) delivered the State of the Industry report at the FIEI Marketing & Management Conference last month at Naples, Fla.

FORECASTING FARM EQUIPMENT SALES, 1983, 1984

(Retail sales of units, United States)

Product	1981 Actual Sales	1982 Actual Sales*	Pct. Change from 1981	Sales Forecast 1983 Unit Sales	Pct. Change from 1982	1984 Unit Sales	Pct. Change from 1983
Farm Tractors:							
Under 40 HP	47,800E	42,000E	– 12.0	43,260	+ 3.0	45,400	+ 5.0
40-99 HP	50,973	41,000	– 19.6	42,517	+ 3.7	45,000	+ 5.8
100 HP and over	43,179	29,500	– 31.7	31,000	+ 5.1	34,000	+ 9.7
Four-wheel drive	9,683	6,900	– 26.7	7,150	+ 16.6	7,850	+ 9.8
Total (40 HP and over)	103,835	77,300	– 25.6	80,500	+ 4.1	86,800	+ 7.8
S-P Combines	26,831	16,208	– 39.6	18,330	+ 13.1	20,000	+ 7.6
Corn Heads	15,700	9,800	– 37.6	10,500	+ 7.1	12,400	+ 18.1
Forage Harvesters (1)	7,604	5,250	– 31.0	5,550	+ 5.7	6,150	+ 10.8
Balers (2)	13,647	8,950	– 34.4	8,900	+ 0.6	9,900	+ 11.2
Balers (3)	16,400E	10,900E	– 33.5	11,600	+ 6.5	12,760	+ 10.0
Windrowers	5,291	4,300	– 20.0	4,300	0.0	4,850	+ 12.8
Mower-Conditioners	18,521	13,950	– 24.7	14,250	+ 2.2	15,818	+ 11.0
Moldboard Plows	18,500E	12,025E	– 35.0	12,025	0.0	12,325	+ 2.5
Disk Harrows	45,100E	29,300E	– 35.0	30,765	+ 5.0	33,850	+ 10.0
Field Cultivators	14,000E	9,675E	– 30.9	10,160	+ 5.0	11,175	+ 10.0
Chisel Plows	13,440E	8,700E	– 35.0	9,135	+ 5.0	10,050	+ 10.0
Grinder-Mixers	5,945	4,800	– 19.2	5,000	+ 4.2	5,400	+ 8.0
Manure Spreaders (4)	11,773	10,050	– 14.6	10,500	+ 4.3	11,500	+ 9.5

*Preliminary figures. E – I&T estimates. (1) Shear-bar type. (2) Bales under 200 lbs. (3) Bales over 200 lbs. (4) Conveyor type.
Source: Farm & Industrial Equipment Institute.

Marketing & Management Conference, part 1:

Forecast indicates 2nd-half improvement, better 1984

"State of the Industry" outlook spans two years, expects moderate increases. Participants comment on the changed marketing-distribution climate of the future. **By Bill Fogarty**

■FAIR WARNING: When the Farm & Industrial Equipment Institute circulated its State of the Industry sales outlook survey form among member companies of its Farm Equipment and Agri-Equipment divisions, the government's "payment-in-kind" program was not yet in place.

Thus, the numbers you see in the tables with this article are "pre-PIK" – though the likelihood of payment-in-kind seemed apparent to many people who were following the plan's development in the news in December.

The survey had 41 participants among Farm Equipment Div. members and 40 in the Agri-Equipment Div. When Peter Perkins (FMC Corp.) delivered the outlook report in late January to the Marketing & Management Conference, the percentages and unit figures he provided were median expressions of the groups' estimates.

Retail volume. Asked what they thought 1983 would produce in retail dollar volume, FED respondents (marketers of field equipment) saw, in median, no change from 1982. The AED (farmstead equipment) members expect a five per cent improvement.

Among FED respondents, the range was from an improvement of 15 per cent to a decline of 18 per cent. The AED group's estimates ranged from a 30 per cent rise to a 10 per cent drop.

Actually, more Farm Equipment Div. participants saw an increase (17) than saw no change (15) or a drop (9). Five of the FED group in-

(More...)

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AGRI-EQUIPMENT FORECASTS, 1983, 1984

(Per cent change, retail dollar volume)

Product Group	1983	1984
Chemical Application Equipment	+5.0	+4.0
Portable Augers, Elevators	0.0	+5.0
Bin-Type Crop Dryers	+1.0	+5.0
Batch, Continuous-Flow Dryers	0.0	+7.0
Dairy and Beef Equipment	+1.0	+5.0
Hog Equipment	+10.0	+8.0
Grain Bins	−5.0	−8.0
Milking Machines	+5.0	+4.0

Source: Farm & Industrial Equipment Institute.

Industry Outlook

(continued)

dicated they thought there would be a sales increase in the first half of the year, 27 in the second half. For the AED participants, eight saw a first-half pickup, 21 picked the second half.

Major marketing changes

Participants were asked to comment on major changes they see coming in marketing and distribution of farm equipment, "given the detrimental economic impact on manufacturers and their dealers caused by the prolonged recession."

There were over 70 responses to this item from participants of both divisions. Some were taking a long-range view in replying while others were concerned with the immediate future. Some viewpoints contradicted others. The general consensus was that there will be less inventory in the field, shorter terms for dealers, more multiple-line dealerships, fewer total dealers and manufacturers, more advance buying by farmers, the slimming down of manufacturers' product lines, and generally greater operating efficiencies by the survivors.

Here are a few of the remarks among the responses:

"Eventually, less selling from inventory, more building to order, tightening of company-funded floor and finance plans, maybe more companies bypassing conventional selling methods; one or more middlemen may be dropped"... "Manufacturers will be cutting down on inventories, which may create shortages by early 1984"... "Fewer dealers, stronger dealers, more control of dealers by major tractor manufacturers, increased reliance on manufacturers for financing when equipment becomes due,

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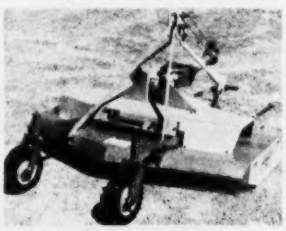

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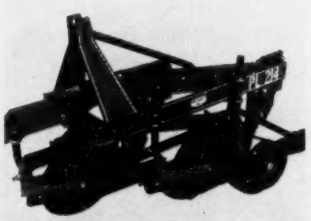

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continued price resistance by buyers"..."Less integrated majors, fewer and stronger shortlines, severe battle among majors for tractor and combine sales"..."Capacity to produce will be significantly reduced" ..."Less dealer inventory, faster turnover, fewer single-franchise dealers, fewer suppliers in the industry, with an outflow of capital into other, more profitable areas."

"Gross margins in most farm equipment won't allow manufacturers to carry the burden and we can no longer pass the entire cost on to the farmer. As a result, when business picks up, farmers will have to wait for preferred brands or accept second or third choice. Middlemen will be most apt to be hurt as economics and market will encourage more manufacturers to sell direct to dealers, bypassing distributors."

"Companies will sell off or discontinue manufacture or marketing of unprofitable or marginal products"..."More specialization of manufacturers in terms of product or geographic strength, increased involvement between manufacturer and customer."

"Entire industry, top to bottom, weakened. Cost of sale from historical methods of solicitation will change, but a means of one-on-one must be retained. Perhaps more expectations of local dealers with commensurate opportunity for profit will return to prominence."

"Dealers working smarter, distributors becoming extinct. Highly leveraged manufacturers heading into oblivion. Terrible shake-out in next nine months. Manufacturers have simply not pursued a conservative fiscal course for the last three years—it's killing them."

"Mid-size dealerships (five men) are under pressure due to cash flow problems to get out of business. We'll see enlargement of some dealers to cover larger areas with more products to meet cash flow needs and farmers' demands. Also, a resurgence of mom-and-pop dealerships—they can cut costs more effectively than other-sized dealerships—is negative, but a fact of life."

The embargo, exports

One question put to respondents: "What effect do you think (the President's lifting the embargo on

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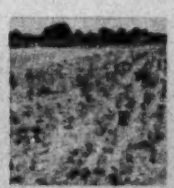

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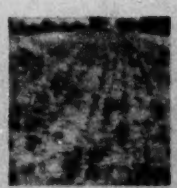

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Industry Outlook

(continued)

grain sales to the U.S.S.R.) will have on commodity prices in 1983?"

This produced a long succession of responses that were unusually close to being uniform and amounted to: "Little or none." One respondent said: "He still hasn't lifted the grain embargo—read the small print!"

The question was followed by a request for recommendations as to how U.S. exports of farm products could be expanded. Replies generally called on the government to play an active role in promoting farm products overseas and facilitating their movement through barter, subsidy, lowering the value of the dollar against other currencies, establishing America as a "reliable supplier," providing more food aid for needy nations and lowering the discount rate.

One respondent said, unashamedly: *"Pray for crop failure of competitors.* This comment may be closer to factual requirements than one would like to admit. The one single immediate factor affecting expanding market opportunities is climate conditions in foreign crop producing nations...."

The Marketing & Management Conference will meet again in May at Moline, Ill., and, if the custom is continued, update its forecast. I&T

Industry in Motion

The American Society of Agricultural Engineers has awarded the FIEI Young Researcher Award to **David W. Smith,** research engineer at **Deere & Co.,** and the FIEI Engineering Merit Award to **Arnold A. Skarjune,** product safety administrator for **White Farm Equipment.**

Allen E. Murfin has been named associate director of the **Southwest Hardware & Implement Assn.,** Fort Worth, Tex., according to R. B. Allen, executive vice-president.

Crary Co., West Fargo, N.D., has named David S. Majkrzak vice-president of engineering. He was previously reliability manager at Steiger Tractor, Inc. of Fargo.

Wilton Corp., Des Plaines, Ill., has acquired the agricultural and industrial hub and spindle business of **Firestone Tire & Rubber Co.** This product line was formerly produced and marketed by Electric Wheel Co., Quincy, Ill., a Firestone division.

Leonard W. Jankowski, senior product manager, **Lindsay Brothers Inc.,** Milwaukee, Wis., has retired after 37 years' service.

Agrotec Inc., Salisbury, Md., manufacturer of sprayers and liquid fertilizer application equipment, has purchased the plant and equipment assets of **Johnson Mfg. Co.,** Pendleton, N.C., also a producer of sprayers and fertilizer applicators. Both brand names will continue to be manufactured.

Irridelco Corp., formerly the Irrigation & Industrial Development Corp., has established new corporate headquarters at 440 Sylvan Ave., Englewood Cliffs, N.J. 07632.

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TILLAGE— still the farmer's biggest gamble

page 20

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page 12

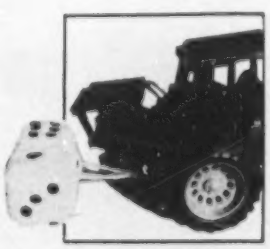
page 26

8: **Electronic Tractor Controls.** Part 3 of our Future Tractor Series looks at the future of computer systems that operate farm marchinery, with an overview of some systems that are working the fields today.

12: **FIEI Marketing & Management Conference.** Coping with Federal Policies and Weak Sales. Industry leaders look at government trade, energy and farm policies, and the prospects for survival if equipment sales stay down or drop lower.

20: **Taking the Risk Out of Tillage.** Contributing editor Frank Buckingham finds that while the perfect tillage system hasn't yet been found, research is going ahead to help farmers cut their losses in the world's oldest gambling game.

26: **Computer Management and New Tractors.** Massey-Ferguson dealers came, saw, and bought in-house computer systems in Phoenix while seeing the new lineup of M-F tractors and implements, plus the new Landini tractor line from a Massey subsidiary.



On the cover... Our ace photographer couldn't find dice big enough, so he scaled down the tractor to create our cover shot.

DEPARTMENTS

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What's Ahead...

March 1983

JANUARY RETAIL SALES OF FARM EQUIPMENT IN THE U.S. opened with a decline against January 1982, according to the Farm & Industrial Equipment Institute flash report, in all product categories except self-propelled combines, which were up sharply. Combine sales also took a jump in December. With the January data, sales of under-40-hp tractors are reported publicly for the first time in years.

	January Unit Retail Sales		
	1983	1982	Pct. Change
Farm Wheel Tractors:			
2-wheel drive			
Under 40 hp	2,020	2,398	-15.8
40 and under 100 hp	2,604	3,426	-24.0
100 and under 140 hp	1,421	2,499	-43.1
140 hp and over	925	1,259	-26.5
Total 2-wheel drive	6,970	9,582	-27.3
4-wheel drive			
Under 200 hp	186	293	-36.5
Over 200 hp	206	369	-44.2
Total 4-wheel drive	392	662	-40.8
Total Farm Wheel Tractors	7,362	10,244	-28.1
Combines (S-P)	1,804	1,374	+31.3
Balers*	372	396	- 6.1
Forage Harvesters**	174	320	-45.6
Mowers Conditioners	556	640	-13.1

*Bales under 200 lbs. **Shear-bar type.

BOTH EXPORTS AND IMPORTS OF FARM EQUIPMENT were in a downward trend in 1982, but the U.S. improved its trade balance. Imports were down 24 per cent at $1.199 billion while exports were off 19 per cent at $2.378 billion.

Tractor imports declined from 1981's $590.5 million to $505.3 million, mostly in the form of reduction in 40- to 79-hp units from Western Europe. Japanese tractor imports were down from $164.6 million to $154.8 million. Most of the reduced import activity from Japan concerned under-30-hp tractors; imports of over-40-hp tractors from Japan went up.

Tractor parts imports fell about 38 per cent from $297 million to $183 million. Most such parts come from Western Europe. (Source: U.S. Dept. of Commerce, Bureau of Industrial Economics.)

SHIPMENTS OF TIRES FOR TRACTORS AND IMPLEMENTS were cut sharply in 1982 from 4.2 million to 3.2 million units, according to the Rubber Manufacturers Assn. Shipments to equipment manufacturers were off 37 per cent at 1 million units; replacement tire shipments fell less severely--down 13 per cent to 2.1 million units.

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AUCTION PRICES OF USED EQUIPMENT

An exclusive I&T monthly report of actual prices paid recently at these leading national wholesale auctions.

Asterisk beside tractor price indicates highest bid offered on tractors which were not sold.

YODER & FREY, INC.
Archbold, Ohio
January 10 & 11, 1983

INTERNATIONAL HARVESTER TRACTORS

Cub, mo., 1954 (Rough) 1175
Cub, bld., (Fair) 1375
Cub Loboy, mo., (Fair) 1700
Cub Loboy, mo., (Rough) 1650
185 Loboy, 1940 (Fair) 340
M, 1950 (Good) 750*
M, 1951 (Good) 900
M, 1950 (Rough) 740
Sup.M, 1952 (Good) 900
Sup.M, 1952 (Fair) 850
Sup.M, 1952 (Rough) 875
Sup.C, cult., 1950 (Good) 1225
300, ldr., 1957 (Fair) 1850
300, 1956 (Rough) 975
300, 1956 (Good) 1300
300 ldr., 1955 (Good) 1575
350 diesel, 1957 (Good) 1000
400, 1956 (Rough) 685
404, (Rough) 1600*
450 diesel, 1957 (Rough) 1100*
454, ldr., 1969 (Fair) 3950
460, 1961 (Fair) 1500
460, 1961 (Fair) 1225*
464, (Fair) 2250*
560, 1960 (Good) 2450
560, ldr., 1961 (Good) 2350
560 diesel, 1961 (Fair) 2000*
574 diesel, 1972 (Fair) 3750
656 hydro, 1968 (Good) 3700
656, 1968 (Good) 3675
706, 1962 (Fair) 2400
706 diesel, 1965 (Good) 3300*
706, 1964 (Fair) 2250*
706, 1964 (Rough) 2000*
756, 1969 (Fair) 4300*
766, 1976 (Fair) 4750*
766, 1974 (Fair) 4250*
766 diesel, 1975 (Rough) 8250*
806 diesel cab, 1963 (Good) 5500
806 diesel, 1964 (Fair) 4600
806 diesel, 1964 (Fair) 3450*
806 diesel, 1963 (Fair) 4600*
806, 1965 (Good) 4125
806, 1965 (Rough) 2900*
856 diesel, 1970 (Fair) 5800*
966 diesel, 1975 (Fair) 8500
986, 1961 (Good) 12,750*
1066, cab, 1975 (Rough) 6100
1066, cab, 1975 (Good) 7000
1066, 1975 (Fair) 6800*
1206 diesel, 1964 (Rough) 4800*
1256 diesel, 1966 (Fair) 5400*
1456 diesel, 1970 (Fair) 6000*
1456 diesel, 1969 (Fair) 5900*
1466 diesel, 1972 (Good) 7100*
1456 diesel, 1976 (Fair) 8100*
1468 diesel, 1975 (Fair) 6250*
1586, 1982 (Excellent) 23,800
1586, 1979 (Good) 13,750
3388, 1982 (Excellent) 24,000*
3788, 1981 (Excellent) 31,000
4166, 1975 (Fair) 13,000*

FORD TRACTORS

8N, 1952 (Fair) 1275
8N, (Good) 1350
8N, 1950 (Rough) 800*
8N, 1952 (Fair) 1300
8N, 1950 (Good) 1500
8N, 1952 (Good) 1300
8N, ldr., 1945 (Rough) 1040
8N, ldr., 1952 (Rough) 1175*
9N, 1946 (Rough) 825*
9N, 1943 (Good) 1150
9N, 1943 (Rough) 650
9N, 1940 (Fair) 1000*
NAA, 1953 (Good) 1610
600, 1955 (Fair) 1525*
600, 1955 (Fair) 1925
600, 1955 (Rough) 1375*
800, ldr., 1957 (Good) 1775
800, 1956 (Rough) 1310*
800, ldr., 1955 (Fair) 1975
601, 1955 (Fair) 1600
901, 1956 (Fair) 1700
2000, 1958 (Good) 2390
2000, ldr., 1970 (Fair) 2800
3000 diesel, 1969 (Fair) 2800
4000, ldr., 1969 (Rough) 2450*
4000 diesel, 1971 (Rough) 1825
4000, 1957 (Rough) 725
4000 diesel, (Fair) 3600
5000 diesel, 1975 (Good) 6000
5000, cab, 1975 (Good) 6650*
7000 diesel, 1974 (Good) 6000
8000 diesel, 1973 (Fair) 4500*
8000, cab, 1971 (Rough) 5500*
8600 diesel, 1975 (Fair) 4500
8600 diesel, 1975 (Good) 6900*
9000 diesel, 1972 (Good) 6300*
9600 diesel, 1975 (Fair) 6250*
1700 diesel, 1980 (Excellent) 3400*
4600 diesel, 1977 (Fair) 6275
8700, duals, cab, 1977 (Excellent) 13,375
Jub, 1953 (Rough) 1450
Jub, 1953 (Fair) 1500
Jub, 1953 (Rough) 1380
Jub, 1953 (Rough) 1225*
9700 diesel, 1977 (Good) 7900
9600 diesel, 1975 (Fair) 5700*

FERGUSON & MASSEY FERGUSON

TD-20, ldr., 1969 (Fair) 3875*
TD-30, 1950 (Rough) 970
35 diesel, 1964 (Fair) 1600
65, 1958 (Rough) 1300*
85 diesel, 1961 (Rough) 1235
135, 1967 (Fair) 3200
150 diesel, 1969 (Rough) 2650

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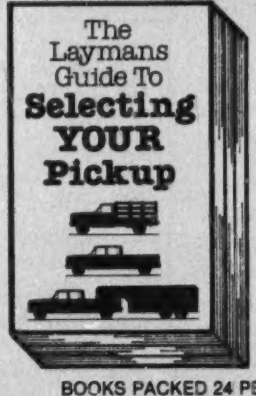

With this book any layman can intelligently choose among standard show room equipment yet have a pickup equipped for his specific needs. — Power or economy, power plus economy, gas or diesel, standard or automatic, plus type rear end are only a few of the subjects covered to enable you to choose your next pickup.

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165 diesel, (Good) 2400
165 diesel, 1968 (Fair) 3875
165 diesel, (Fair) 2200*
1130 diesel, cab, 1969 (Fair) 4600*
1130 diesel, cab, 1968 (Fair) 4150
1135 diesel, cab, (Fair) 9200*
1800 diesel, 1974 (Fair) 8300*

WHITE TRACTORS

2-105 diesel, 1976 (Fair) 8250*
4-150, (Rough) 8500*

MINNEAPOLIS-MOLINE TRACTORS

G-1000 diesel, Vista, 1967 (Fair) 2500*
UB, 1949 (Rough) 550
GV1 585

JOHN DEERE TRACTORS

B, 1947 (Fair) 580
G, 1946 (Rough) 575*
40, 1954 (Fair) 1100*
50, bld, 1955 (Fair) 1075
60, 1953 (Fair) 750
70, 1955 (Fair) 940
42 diesel, 1958 (Fair) 1760
720 diesel, 1957 (Fair) 1375*
720 diesel, 1958 (Fair) 1275
1010 diesel, dozer, (Fair) 2450
2510 diesel, (Good) 4700
3020, 1967 (Fair) 3250*
3020, (Good) 3500
3020, 1967 (Fair) 3100*
4010 diesel, 1965 (Fair) 3250
4010 diesel, 1963 (Fair) 4050
4010 diesel, 1966 (Fair) 3150
4010 diesel, 1964 (Fair) 4700*
4010 diesel, 1964 (Fair) 3850
4020 diesel, 1965 (Good) 6125*
4020, 1967 (Good) 3850
4020 diesel, 1967 (Good) 6500
4020, 1956 (Fair) 2300*
4320 diesel, 1969 (Good) 7700*
4430, duals, cab, 1976 (Fair) 11,700
4430 diesel, 1978 (Good) 10,800*
4430, cab, 1977 (Good) 12,500
4520, cab, 1970 (Fair) 6250*
4620 diesel, 1970 (Good) 8300*

ALLIS-CHALMERS TRACTORS

C, 1947 (Fair) 425
CA, attach., 1950 (Fair) 650*
CA, attach., 1951 (Fair) 1200
WD, 1950 (Rough) 600
WD-45, 1952 (Good) 825
WD-45, 1952 (Rough) 440
WD-45, 1952 (Good) 1120
WD-45, 1951 (Fair) 810
D-15, 1965 (Fair) 2400
D-15, ldr., 1964 (Fair) 2000
D-15, 1966 (Fair) 1200*
D-15, 1962 (Rough) 1250*
D-17, 1965 (Fair) 1175
190 diesel, 1967 (Good) 3900*
190XT diesel, 1967 (Rough) 3200
190XT, cab, 1972 (Fair) 5550
210 diesel, 1973 (Good) 5400*
220 diesel, (Fair) 3300*
655, dozer, ... 6500

OLIVER TRACTORS

566, (Fair) 350
1600, 1962 (Fair) 2100
1755 diesel, cab, (Fair) 5350*
1855 diesel, 1972 (Good) 5200*
1950 diesel, 1965 (Rough) 2300*
1955 diesel, 1972 (Rough) 4800*
1955 diesel, 1971 (Fair) 4250
2150, cab, 1970 (Fair) 4400*

COCKSHUTT TRACTORS

570, (Good) 850
570, (Rough) 325

CASE TRACTORS

400, 1958 (Rough) 1100*
400, 1956 (Rough) 825*
530, (Good) 3900*
700, (Fair) 1075
730, 1968 (Fair) 2200
930 diesel, ldr., 1966 (Rough) 2300
870 diesel, cab, 1972 (Fair) 5650
930 diesel, 1965 (Fair) 2425
930 diesel, cab, 1968 (Fair) 2750*
930 diesel, 1967 (Good) 3800*
930, 1966 (Fair) 2700*
930 diesel, 1967 (Fair) 2600*
1030, 1968 (Fair) 2300*
1030 diesel, 1967 (Good) 3500*
1175 diesel, cab, 1975 (Fair) 9000*

ENLOW AUCTION CO.
Tulsa, Okla.
January, 1983

ALLIS-CHALMERS TRACTORS

D-14, 1958 (Fair) 1200*
D-15, 1964 (Good) 1700*
D-19 diesel, 1961 (Fair) 950
170 diesel, 1971 (Fair) 2850
190 XT diesel, 1970 (Good) 3700*

CASE TRACTORS

300, 1957 (Good) 925
930 diesel, 1962 (Fair) 3000
930 diesel, 1963 (Fair) 3100
970 diesel, 1972 (Good) 4200
1030 diesel, 1966 (Fair) 3300

DAVID BROWN TRACTORS

885 diesel, ldr., 1975 (Good) 5225
990, 1967 (Good) 2750*

FERGUSON TRACTORS

20, 1948 (Fair) 750*
20, 1949 (Good) 1450
20, 1949 (Good) 1200*
20, 1950 (Fair) 800*
20, 1950 (Good) 1025
30, 1951 (Rough) 700
30, 1952 (Fair) 850
30, 1952 (Fair) 750
30, 1952 (Good) 1550
30, 1953 (Good) 1275*

FORD TRACTORS

9N, 1940 (Fair) 700*
9N, 1941 (Good) 850*
9N, 1941 (Good) 1000
9N, 1942 (Fair) 700*
9N, 1943 (Good) 1325
9N, 1943 (Fair) 900*
9N, 1944 (Good) 1425
9N, 1944 (Rough) 650
9N, 1944 (Good) 1200*
9N, 1945 (Good) 1050
9N, 1946 (Fair) 975*
9N, 1946 (Fair) 1100
9N, 1947 (Good) 1350
9N, 1947 (Good) 1025
8N, 1947 (Good) 1300
8N, 1947 (Good) 1250
8N, 1948 (Excellent) 1375
8N, 1948 (Fair) 1200*
8N, 1948 (Good) 1425
8N, 1949 (Good) 1575
8N, 1949 (Good) 1500
8N, 1950 (Good) 1575
8N, 1950 (Good) 1400
8N, 1951 (Good) 1400
8N, 1951 (Fair) 1125
8N, 1952 (Good) 1825
8N, 1952 (Fair) 1125
8N, 1952 (Good) 1250
8N, 1952 (Fair) 1200
8N, 1952 (Excellent) 1950
NAA, 1953 (Fair) 1350*
NAA, 1953 (Good) 2000
NAA, 1953 (Excellent) 2550
NAA, 1953 (Fair) 1625
NAA, 1953 (Good) 2200
NAA, 1953 (Good) 1900
NAA, 1953 (Good) 1800*

(More...)

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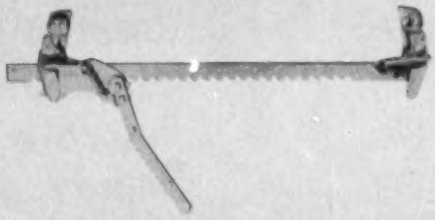

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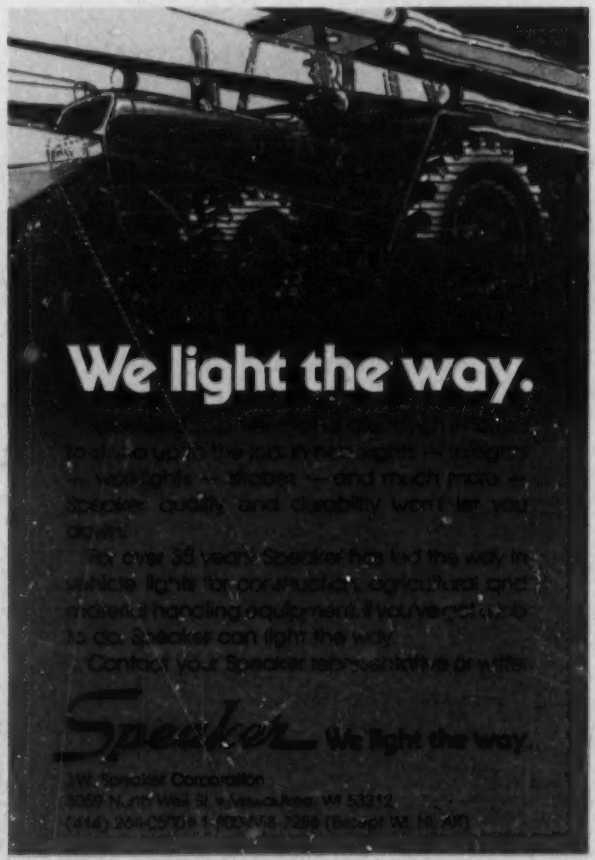

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Auctions
(continued)

NAA, 1953 (Excellent) 2625
600, 1954 (Fair) 1700*
600, 1955 (Good) 2100
600, 1955 (Good) 2225
600, 1955 (Good) 1950*
630, 1956 (Good) 2650
640, 1956 (Good) 2150*
640, 1956 (Fair) 1600*
640, 1957 (Good) 1975*
641, 1957 (Good) 2025
800, 1954 (Fair) 1700
800, 1955 (Good) 1950*
850, 1955 (Good) 2100
850, Idr., 1956 (Good) 2350
860, 1957 (Good) 2525
860, 1957 (Good) 2350
901, 1956 (Fair) 1600*
861, 1956 (Good) 2000*
861, 1960 (Good) 2225*
861, 1960 (Good) 2950
960, 1955 (Good) 1250*
901, 1956 (Good) 1175*
Fordson diesel, 1957 (Fair) 950*
2000, 1962 (Good) 2800
2000, 1964 (Good) 2900
4000, Select-O-Speed, 1962 (Good) 1400*
4400 diesel, backhoe, 1966 (Good) 4850
4500 idr., 1966 (Rough) 2200
5000 diesel, 1965 (Fair) 3150*
5000 diesel, 1966 (Good) 3850
7000 diesel, 1969 (Fair) 4550
9600 diesel, 1977 (Good) 6300*

INTERNATIONAL HARVESTER TRACTORS

Cub, 1956 (Fair) 625
Cub, mo., 1958 (Good) 1525
H, 1952 (Good) 675
240 diesel, 1962 (Good) 2100
B-414, 1964 (Fair) 1050*
624 diesel, 1967 (Fair) 1800*

JOHN DEERE TRACTORS

MT, 1949 (Fair) 490*
B, 1948 (Good) 500
40, 1954 (Good) 875
50, 1955 (Good) 1050
70 diesel, 1955 (Good) 1250*
2010, backhoe, 1963 (Good) 4000
3010 diesel, 1961 (Fair) 2900
2020 diesel, 1969 (Good) 4500
2020, idr., 1970 (Good) 4900
4020 diesel, 1966 (Good) 4800*
4020, 1966 (Good) 3000
4020 diesel, 1967 (Good) 4700*
1530 diesel, 1975 (Good) 4850*

MASSEY-FERGUSON TRACTORS

35, 1960 (Fair) 1850*
35, 1960 (Good) 2100*
35 diesel, 1961 (Good) 2500
35 diesel, 1961 (Fair) 1900*
35 diesel, 1962 (Good) 2650
35, 1962 (Good) 2200*
35 diesel, 1962 (Good) 2350*
35, 1963 (Fair) 1850*
35 diesel, 4-cyl., 1963 (Fair) 1225
50, 1962 (Good) 2400
50, 1963 (Good) 2600
50, 1963 (Fair) 1790*
65 diesel, 1960 (Fair) 2050*
65, 1960 (Good) 2230*
65, 1961 (Good) 2300
65 diesel, 1961 (Good) 2875
65, 1961 (Fair) 1775*
65 diesel, 1962 (Good) 2275*
65, 1962 (Fair) 1950*
65 diesel, 1963 (Good) 2650
65 diesel, 1963 (Good) 2350*
135 diesel, 1965 (Good) 3250*
135, 1966 (Good) 3050
150 diesel, 1965 (Good) 3250*
165 diesel, 1966 (Fair) 2580*
165 diesel, 1966 (Fair) 2750
165 diesel, 1967 (Good) 3600
165, 1967 (Good) 2600
165 diesel, 1969 (Fair) 2950*
165 diesel, 1970 (Good) 3400
175 diesel, 1966 (Fair) 3000*
175 diesel, 1968 (Good) 3950*
175 diesel, 1972 (Good) 4550*
245 diesel, (New) 8450
245 diesel, (New) 8150
255 diesel, 1976 (Fair) 4250
285 diesel, 1977 (Good) 6500*
285 diesel, cab, 1977 (Good) 7500
1080 diesel, 1969 (Good) 4300
1105 diesel, cab, 1975 (Good) 6550*
1155 diesel, cab, 1975 (Good) 7900*

OLIVER TRACTOR

S-55, 1957 (Good) 1350

NOTES
Prices reported are for individual sales at wholesale on "as is," "cash and carry" basis.
Prices reported are NOT averages.

Condition classifications: EXCELLENT means—Engine: in perfect condition, 400 to 600 hours of use; Rubber: 80% tread remaining, no breaks or cracks; Paint: original and bright; General Appearance: excellent.

GOOD means—Engine: good running condition; Rubber: 70% tread remaining, no breaks or cracks; Paint: original paint or a good repaint job; General Appearance: good over-all.

FAIR means—Engine: possibly in need of a minor overhaul to restore; Rubber: 60% tread remaining, some cracking evident in side walls; Paint: only fair, weathered and some rust apparent; General Appearance: worn, some dents, minor parts such as gage covers missing or broken.

ROUGH means—Engine: obviously in need of a major overhaul; Rubber: smooth; Paint: scarred, weathered, rusty, needs painting urgently; General Appearance: dents, ruptures, broken parts, loose wires, some components such as lights broken, missing or inoperative.

DEMONSTRATOR means—used for demonstrating only and in practically new condition.

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and don't pay too much...
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